Addendum to "Loss of Point-to-Point Traffic in Three-State Circuit Switches"

I am grateful to Alan L. Tritter for pointing out that the summation in loss formula (34) of my recent paper [1] is a binomial form and is easily performed algebraically. When this is done, the loss formula takes the simpler form,

$$b = \frac{(L-1)!(T-1)!}{K!S!}\left(\frac{LN}{TM}\right)^{T-1}\left(\frac{TM}{LN}+1-a_1\right)^{s}a_1{}^{k},$$

where $S = L + T - 2 - K$, a_1 is the mean usage of each inlet, and the other variables are as indicated in Fig. 4(a) of the paper.

This formula results from the model of Jacobaeus [2], as modified by Kümmerle [3], when the traffic is assumed to be Bernoullian.

None of the numerical results or conclusions of the paper are affected by this additional simplification.

References

1. M. Karnaugh, "Loss of Point-to-Point Traffic in Three-Stage Circuit Switches," *IBM J. Res. Develop.* **18,** 204 (1974).
2. C. Jacobaeus, "A Study on Congestion in Link Systems," *Ericsson Technics* **51,** 3 (1950).
3. K. Kümmerle, "Point-to-Point Loss in Link Systems: Model and Calculation Methods," *IEEE Trans. Commun. Technol.* **CT-19,** 261 (1971).

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